

Work Assignment Form. (WebForms v1.0)

Work Assignment SOW

Work Assignment Title: USEPA Megacities Partnership – Africa/Latin America

Contractor: Industrial Economics, Inc.

Contract No.: EP-D-14-031

Work Assignment Number:

Estimated Period of Performance: Date of Issuance to September 30, 2018

Work Assignment COR (WA COR):

Sara Terry
Office of Air Quality Planning and
Standards, Policy Analysis and
Communication Staff (C404-03)
919-541-7576
terry.sara@epa.gov

Paul Almodovar (Alternate WA COR)
Office of Air Quality Planning and
Standards, Immediate Office (C404-03)
919-541-7576
terry.sara@epa.gov

Contract Level COR (CL COR):

Lorraine Reddick
Office of Air Policy & Program Support,
Immediate Office (6103A)
202-564-1293
reddick.lorraine@epa.gov

I. Background

Urban environments are where people and pollution come together. These places require a concerted approach to mitigate exposure and health impacts. Some of the most challenging, and rapidly growing, urban areas are in developing countries where data, resources and capacity are limited, but health impacts of air pollution are significant. The goal of the project is to demonstrate the ability to assess air quality and implement air quality management programs in a second African city, while achieving and quantifying co-benefits.

Work to develop air quality-climate management plans in the first African city – Accra, Ghana - was initiated under Contract EP-D-14-032. Building on the success of this effort is the intention to bring lessons learned and model planning to other African American cities, targeted by the availability of country level interest, capacity, and potential for partnering with other donor organizations and efforts. This will be accomplished using

innovative tools and techniques based on those that have proven most effective for U.S. cities and states, and which can be adapted for use in a much different policy and technical context. Building on previous work, the Megacity Partnership will also work to build a regional community of experts and support those environmental professionals who are engaged where climate and clean air come together – improving air quality while also achieving benefits for climate.

II. Purpose

The purpose of this work assignment is to undertake air quality management planning in a second megacity site in Africa.

III. Tasks and Deliverables:

The Work Assignment Contracting Officer Representative (WA COR) will review all deliverables in draft form and provide revisions or comments to the Contractor. The Contractor shall incorporate the comments as specified by WA COR. Final deliverable shall be in Microsoft Word and/or other appropriate electronic format requested for the deliverable.

Contractor personnel shall at all times identify themselves as Contractor employees and shall not present themselves as EPA employees. Furthermore, they shall not represent the views of the U.S. Government, EPA, or its employees. In addition, the Contractor shall not engage in inherently governmental activities, including but not limited to actual determination of EPA policy and preparation of documents on EPA letterhead.

The Contractor shall not duplicate any work performed previously.

Task 1 - Prepare Workplan

The contractor shall prepare a Work Plan within 15 calendar days of receipt of a work assignment signed by the Contracting Officer (CO). The Work Plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, and a detailed cost estimate by task and a staffing plan.

The WA COR, CL COR and the CO will review the Work Plan. However, only the CO can approve/disapprove, suggest revisions, or change the Work Plan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised Work Plan incorporating the CO's comments, if required.

Deliverables and schedule under Task 1

1a. Workplan within 15 calendar days of receipt of work assignment.

1b. Revised workplan within 15 calendar days of receipt of comments from the Contracting Officer, if required.

Task 2: Information Collection and Review

Building on work begun under contract EP-D-14-031, work assignment 2-10, the Contractor shall conduct an information collection and review program. This task investigates relevant documents and reports to better understand ongoing efforts undertaken in the target city and country on air pollution control and to understand current air quality conditions in the country, region, and city; any relevant data gaps and resource and capacity needs; and any climate or energy projects and activities that would be expected to impact air quality. Information would come from a variety of sources, but would include an assessment of data currently available in LEAP, BenMAP-CE, any current country climate or development action plans, Climate and Clean Air Coalition initiatives or action plans, and the Global Burden of Disease reports.

Deliverable and schedule under Task 2

2a. Final Information Collection and Review Report

Task 3: Prepare for and Present Workshop on Key Components of AQM

Working closely with the EPA and building on the template established under the Accra Megacity Partnership, the Contractor shall design an AQM workshop curriculum that is responsive to the information gathered under task 2. The curriculum should provide a broad overview of AQM, but also spend more focused attention on key data and resources gaps. The material can use US examples and processes to the extent these can be applied, or adapted to apply, in the developing country context.

The Contractor shall work with the U.S. EPA to identify experts to provide this information. The Contractor shall prepare the workshop agenda and training materials in MS PowerPoint format and provide to meeting attendees in both hard and soft copy formats. The Contractor shall organize the training and provide all training materials and signage. The Contractor is not required to cover travel or per diem costs for workshop participants. Ghana EPA will be requested to provide free or low cost venue support. The appropriate local, regional, or national officials will identify senior level policy and technical staff to participate in the workshop. Additionally, one or more experts from the EPA may participate.

Once the curricula are finalized, the Contractor shall organize and hold a workshop in the target city. EPA experts/program managers, appropriate local, regional, and national officials, as well as selected participants from other African cities may participate in each

of the workshops.

Deliverables under Task 3

3a. Target City AQM Workshop Curriculum

3b. Workshop Planned and Delivered

Task 4. Conduct Baseline Health Assessment and Benefits of Implementing Draft Air Quality Management Plan for Target City [Contract Ref. – Work Area (a)]

If not completed under Contract EP-D-14-032, the Contractor shall conduct analysis to define the expected level of air pollutant, toxics and GHG emission reductions and air quality improvement that could be achieved with implementation of specified control strategy options on key source sectors. This analysis shall evaluate potential air quality improvements from source emission reductions within and from outside the target city. Using this information, the Contractor shall guide technical staff from the target city in assessing the costs and benefits of achieving the plan objectives (versus a no plan/control scenario) using the BenMAP-CE tool (for health impacts assessment and valuation) or LEAP-IBC benefit calculator and available cost models (for control cost estimation).

The Contractor shall work with in-country staff to develop an appropriate communication plan with supporting materials regarding the results of this assessment, as well as relevant requirements (human and financial resources, technology costs, etc.) to implement the AQMP strategies, to key in-country decision makers.

Deliverables and schedule under Task 4

4a. Baseline and Benefit Assessments Completed

4b. Communication Plan and any Relevant Supplemental Materials

Task 5 – Begin Air Quality Management Plan for Target City [Contract Ref. – Work Areas (a) and (e)]

The Contractor shall initiate efforts to develop a new draft AQMP in a second African city, which will be identified and the first mission completed under Contract EP-D-14-032. This plan shall take into consideration the relevant characteristics that city (henceforth “the target city”) and include the necessary control measures, relevant laws and policies, optimum pollution abatement technologies and equipment, monitoring of effects, and methods for assessing progress.

The Contractor shall assure that the plan includes the following elements:

- Assess the current status of air pollution in the target city. The Contractor shall provide technical guidance to technical staff in the target city (e.g., environmental quality assessment methods, technology for monitoring and analysis of aerosols, pollutant speciation, and photochemical reaction) to compile and analyze recent PM2.5 ambient monitoring data, and any data on the composition of PM2.5 concentrations (e.g., sulfate, nitrate, organic carbon, elemental carbon, and other direct PM2.5). Analyses shall be presented in terms of annual average and 24-hour PM2.5 averages. In the absence of any existing reports, Contractor shall work with the appropriate local, regional, or national officials to estimate contributions to PM2.5 ambient concentrations from sources within and near to the target cities. These estimates can be developed using air quality modeling or other techniques, including existing materials in the Long-range Energy Alternatives Planning-Integrated Benefits Calculator (LEAP-IBC) tool.
- Develop current (“baseline”) and projected (“future year”) emissions inventories. The Contractor shall provide technical guidance on compiling emissions inventories (including use of emissions factors, relevant models, and readily available inventory platforms) for the preparation of emissions inventories. Technical staff from the target city will be responsible for developing the emissions inventories and updating LEAP-IBC to include that data. The emissions inventory shall include the key industries and sectors contributing to air pollution in the target city and key pollutants (e.g. PM2.5, including black carbon, SO2, NOx, VOC and ammonia as well as CO2.) The baseline inventory shall include the most recent years available and could be drawn from existing local or regional inventories if available. The future year inventory shall be a target year determined by the appropriate officials based on expected implementation of the air quality management plan and estimate emissions changes due to 1) reductions due to ongoing and existing regulations for the stationary, mobile and area sources in the target city, projected growth in emissions from existing and new sources, and reduction in emissions due to projected shutdown of existing sources. (Note: the baseline and future year inventories are necessary to conduct air quality, cost-benefit, and other analysis needed for the air quality management plan.) The Contractor shall also provide guidance on maintaining, managing and regularly updating the emission inventory if procedures do not already exist.
- Develop control strategy. Based on the identification of key source sectors, the Contractor shall identify the pollution abatement technologies and approaches to reduce emissions contributing to PM2.5 and other key air pollutant concentrations. Information on pollution controls can include capital costs of control technologies, operation and maintenance costs, time needed for installation, and overall cost per ton of pollutant reduced. The Contractor shall recommend air pollution prevention and controls chosen from the available

measures, along with estimates of the total abatement of key pollutants after implementing the recommended measures. This recommendation must also identify the geographic region for implementation, outline the recommended steps (i.e., policies, regulations, guidance, etc.) for putting these measures in place, potential avenues for financing the recommended policies and programs, and include procedures for tracking progress and ensuring compliance with the measures and plan.

Deliverables and schedule under Task 5

5a. Initial Draft AQMP for Target City

Task 6 – African Region Community of Practice [Contract Ref. – Work Areas (a) and (e)]

A second Megacity Partnership site in Africa will be selected at the conclusion of work on Contract EP-D-14-032 and initial scoping mission completed. The Contractor shall assist in the cooperation between the USEPA Megacity Partnership cities and other governmental and non-governmental organizations that may also be addressing air quality issues in the Africa region. This cooperation may include Regional planning and coordination conference calls, and one face-to-face collaboration meeting. To encourage intra-Africa collaboration, the Contractor shall ensure expert participation for applicable training or workshops from other African countries. For relevant meetings, local partners will be requested to provide free or low cost venue support, and the contractor shall provide logistical support for any low cost options, including room and equipment rental.

Deliverable under Task 6

6a. Community of Practice Collaboration Meeting

Task 7 - Support Ongoing Collaborations with World Bank and United Nations Environment Programs

The World Bank Pollution Management and Environmental Health Program (PMEH), United Nations Environment, and the USEPA have been collaborating on a number of work areas to support air quality management measurement and planning. The Contractor shall provide support to the USEPA contributions to these collaborations, particularly in targeted city.

This support shall include:

- Participation in planning meetings and, to the extent allowable, sharing relevant data with key partners. Contractor shall ensure expert participation in no more than two coordination meetings or other forum to promote the Megacity

Partnership or otherwise support collaborations with PMEH and UN Environment.

- Assist with the siting of ambient air monitoring equipment purchased by key partners, including potentially the use of low cost sensor devices in Accra, Ghana. Include support for a U.S. based planning meeting to ensure cooperation across various ambient measurement efforts.
- Capacity building support for chemical analysis of PM filters in Africa. This includes shipment of PM filters to appropriate laboratories in the US and limited consultations on laboratory protocols.
- Support partner led joint stakeholder and training workshops, including ensuring relevant contributions from government and academic experts in low and middle income countries.

Deliverables under Task 7

7a. Joint Planning Meetings

7b. Monitor equipment site protocols and plan

7c. Laboratory consultation and speciation analysis

IV. SCHEDULE FOR DELIVERABLES

Upon receipt of work assignment, the contractor shall provide the following specific deliverables to the EPA WA-COR:

TASK	DELIVERABLE	FORM AND QUANTITY	SCHEDULE
Task 1:	1a. Work Plan	Electronic document	Within 15 days of work assignment receipt.
	1b. Revised Work Plan, if necessary	Electronic document	Within 15 days of receiving comments from CO.
Task 2	2a Final Information Collection and Review Report	Electronic document	February 2018
Task 3	3a. Target City AQM Workshop Curriculum	Electronic documents	April 2018
	3b. Workshop Planned and Delivered	Workshop delivered	April 2018

TASK	DELIVERABLE	FORM AND QUANTITY	SCHEDULE
Task 4	4a. Baseline and Benefit Assessments Completed for Target City	Electronic documents	July 2018
	4b. Communication Plan and any Relevant Supplemental Materials	Electronic documents	July 2018
Task 5	5a. Draft AQMP	Electronic documents	September 2018
Task 6	6a. Community of Practice Collaboration Meeting	Meeting held	May 2018
Task 7	7a. Joint Planning Meeting	Meeting held	January 2018
	7b. Monitor equipment site protocols and plan	Electronic documents	February 2018
	7c. Laboratory consultation and speciation analysis	No more than 200 samples analyzed	TBD